



August 17, 2018

### SUMMARY OF REQUIREMENTS

The following is a summary of the new and revised paragraphs in UL 508A, the Standard for Industrial Control Panels, third edition, published on April 24, 2018, which have an effective date of July 1, 2020, and the action that may be required to determine compliance. Requirements itemized in Table 1 will be enforced on the Effective Date. Table 2 (additional details provided within the Heading of Table 2).

These new and revised paragraphs were issued in several bulletins with some being published for the first time with the issuance of the third edition of the Standard. The table below includes the date of the revision bulletin or the publication date of the third edition of the Standard to identify when the new and revised paragraphs were issued. Note that Appendix C and Table C.1.1 were formerly "Supplement SA" from the second edition of the Standard.

Also note that an asterisk \*, along with **bold text** in the last column ("Effect of Revision") indicates the revision resulted in a requirement that is more rigorous than what was required by the Standard before the revision was published.

Lastly, please note that paragraph numbers shown in the tables may be different than the corresponding paragraph in the third edition of UL 508A.

**TABLE 1 – EFFECTIVE DATE JULY 1, 2020**

Paragraphs/ Table	Date Revision Issued	General Subject and Comment	Effect of Revision
1.2, 1.23, 52.6	8/3/16	Industrial Control Panels for Load Management Applications	Expands scope to allow additional type of panel
45.1.1, Table C.1.1	8/3/16	Adding UL 60730, Standard for Automatic Electrical Controls - Part 1: General Requirements	Adds additional certification Standard for XAPX/2 products
26.3.1, Table C.1.1	8/3/16	Adding important information in Notes column of Table C.1.1 for CCNs, ACVS2 and LZFE2.	Allows products certified under CCNs ACVS2 and LZFE2 to be used without procedure description when installed per the manufacturing instructions
19.2, Table C.1.1	8/3/16	Adding important information in Notes column of Table for an environmental Type rated wireway	Allows an environmental Type rated wireway to interface with an enclosure of the same Type rating without procedure description.
28.6.2, Table C.1.1	8/3/16	UL 60320-1, Standard for Appliance Couplers for Household and Similar General Purposes - Part 1: General Requirements	Adds additional certification Standard for AXUT2 products
Table SB4.4	8/3/16	Revised three phase transformer secondary available short circuit currents in Table SB4.4	All short circuit current values in table were corrected. Using previous

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			values in Table created no hazards as they were higher than the corrected values.
28.2.5, Table C.1.1	3/7/17	Connectors for Use in Data, Signal, Control and Power Applications	Allows the use of and provides guidance for the selection of connectors Recognized in the category ECBT2.
36.2, Table C.1.1	3/7/17	Revised requirements for resistors	Expands requirements for resistors and reactors and Provides guidance for the use of resistors certified in the category NMTR/2
36.3, Table C.1.1	3/7/17	New requirements for reactors	Adds requirements for reactors and provides guidance for the use of reactors certified in the categories NMTR/2, XPTQ/2, and XQNX.
1.1	3/7/17	Maximum Voltage in Scope increased to 1000 V	Increases the maximum allowable supply voltage for panels to 1000 V, AC or DC.
15.2	3/7/17	Sizing an internal bonding conductor	Where an internal over-current device is installed to protect control circuit conductors for door mounted equipment, the ampere rating of this over-current device can be used to size the bonding conductor connected to the enclosure doors.
66.5.3, Table 66.2	3/7/17	Power circuit conductors smaller than 14 AWG in industrial machinery panels	Clarifies that power circuits that comply with the conditions in Table 66.2, 16 AWG or 18 AWG are able to be used.
19.6, 53.8	3/7/17	Enclosures intended for use with conduit hubs, closure plates and other equipment field installed in enclosures with factory provided openings	<b>* Adds a requirement that equipment intended to be field installed in enclosure openings shall be marked or provided with instructions that identify the equipment necessary to maintain the environmental integrity of the enclosure. This may be accomplished by</b>

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			identifying the necessary environmental type designation or by identifying the specific manufacturer and models of the field installed equipment.
14.2(b). 15.1, Table C.1.1	3/7/17	Grounding and bonding braids shall be Listed and sized according to 15.1.	* Adds requirements that grounding braids shall comply with the requirements of UL 467, certified under CCN KDER and be sized according to 15.1.
27.3.2 Exception No. 2	6/16/17	Requirements added for panels with LED luminaires for enclosure maintenance lighting	Circuits with LED luminaires are able to comply with the requirements for control circuits in Section 37 – 44.
66.6.1 Exception, 66.6.4	6/16/17	Exceptions for connecting equipment on the supply side of a disconnecting means for industrial machinery panels	Allows specific equipment and circuits to be connected to the supply side of each disconnecting means.
21.1.1	6/16/17	Air outlet from a forced ventilation system in the area occupied by an Operator	Allows an air outlet from a forced ventilation system in the area occupied by an Operator, when a barrier or duct is provided to redirect the airflow in a direction 90 degrees or greater away from the operator.
28.5.4 a)	6/16/17	Cord-connected outdoor rated panels	A cord, used on equipment having a Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure shall be marked either “Outdoor” or “W,” or both.
SB3.2 Ex	6/16/17	Short Circuit Requirements for Secondary Components of a Limited Power Source	Secondary circuits operating at 24 VDC maximum and supplied from a source with a maximum output power of 100 VA, shall be considered control circuits when applying the requirements of Supplement SB.
32.4, 32.5	6/16/17	Feeder tap conductors	Requirements for feeder tap conductors were

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			added based on NEC Articles 240 (non-motor loads) and 430 (motor loads).
19.3, Section 63, Table C.1.1	6/16/17	Environmental-rated accessories for Enclosures	Allows the use of components in the new Environmental-rated accessories for Enclosures categories, FTTA and FTTA2.
29.3.6	6/16/17	Wiring ferrules	Added requirements covering the use of ferrules.
Sections 100-114	6/16/17	Three new specific use industrial control panel types	Added requirements in Part II for control panels for: 1) Permanently installed electrical equipment for aquatic playgrounds; 2) Permanently installed electrical equipment associated with commercial water park rides, wave pools and similar installations; and 3) Permanently installed electrical equipment associated with commercial and large residential swimming pools and in-ground spas.
66.1.3	7/31/17	Interlocking means to prevent restoring power	Revised requirements for industrial machinery panels to allow the disconnect interlocking means to prevent restoring power while the enclosure door containing the disconnect is open unless a defeat mechanism is operated. The previous requirement applied to any enclosure door that is open.
43.1.2, Table 43.1	7/31/17	Redefining the definition of Low Voltage	Revised requirements for low-voltage limited energy circuits to allow a maximum open-circuit secondary voltage of 60 volts dc.
28.7, 37.8, 66.4.6, Table	7/31/17	Cable Assemblies and Fittings for Power and Control Circuits	Allows the use of components in the

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C.1.1			categories, Multi-Point Interconnection Power Cable Assemblies for Industrial Machinery (PVVA) and Cable Assemblies and Fittings for Industrial Control and Signal Distribution (CYJV).
SB 4.2.3 Exception No. 4	7/31/17	Substituting for a Non-Current Limiting Overcurrent Device	<b>* Revised the requirement for substituting non-current limiting overcurrent device with a current-limiting overcurrent device to allow only fuses.</b>
Table 19.2	7/31/17	Type 6P devices closing an opening in a Type 4X enclosure	Added 6P as an additional device that may be used to close an opening in a Type 4X enclosure
34.1.4, Table C.1.1	4/24/18	Circuit breakers with motor overload protection	Allows the use of a special type of circuit breaker that provides both branch circuit and motor overload protection.
36.3, 47.1, 75.8.4, Table C.1.1	4/24/18	Surge protective devices	Allows the use of and provides guidance in the selection of surge protective device in the categories, VZCA and VZCA2.
30.3.5, 55.4	4/24/18	Multiple disconnects	<b>* Adds a requirement that when two or more disconnects are provided, each disconnect shall be legibly marked to indicate the equipment it disconnects. Allows the use of two or more disconnects for multiple supply circuits where the disconnects are not grouped together in one location.</b>
Appendix C	4/24/18	Supplement SA moved to Appendix C in third edition of Standard – Subsequently removed from the Standard on 7/3/18 and relocated to UL's Industrial Control panel Website at <a href="http://www.UL.com/UL508A-SupplementSA">www.UL.com/UL508A-SupplementSA</a>	No changes to requirements for component selection. The Standard references the website location of Supplement SA.
42.2.1.1,	6/16/17	Power supplies, isolated secondary	Added references to

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42.3.1, 44.1.4, 45.1.1, Table C.1.1		sources, limited power/limited energy sources, switching components of control circuit devices	Standards, category CCNs and performance capability to include the use of additional components. A summary of these revisions is provided below in items 1 to 11.
<ol style="list-style-type: none"> <li>1) Included the new UL Standards UL 61010-1 and UL 61010-2-201 for CCNs NRAG, NRAQ2, NRAQ and NRAQ2;</li> <li>2) Added power supplies evaluated to UL Standards UL 508 or UL 61010-1 and UL 61010-2-201 for CCNs NMTR, NMTR2, NRAQ and NRAQ2 to Table SA1.1 for Section 42;</li> <li>3) Added a note for Information Technology Equipment Power Supplies that have been evaluated for use at 40°C to Section 42, and power supplies evaluated to UL 62368-1;</li> <li>4) Added UL 62368-1 as an alternate Standard for Information Technology Equipment entries in Table SA1.1;</li> <li>5) Revised the note for Listed Information technology equipment adding a limited-power source;</li> <li>6) Added new CCNs QQJQ and QQJQ2 for power supplies evaluated to UL 62368-1;</li> <li>7) Added a note for Listed Information technology equipment and Listed Information and communication technology equipment power supplies that only when marked as a limited power source (LPS) is the output supplying a limited power (limited energy) circuit;</li> <li>8) Added information and communication technology equipment to paragraphs 42.2.1.1 and 44.1.4;</li> <li>9) Added Listed and Recognized Information technology equipment and Information and communication technology equipment power supplies to paragraph 44.1.4;</li> <li>10) Added a note for Listed Information technology equipment and Listed Information and Communication Technology Equipment "Output connectors/circuits of Listed ITE and Listed ICT equipment are assumed Limited Power Sources (LPS) supplying a limited power (limited energy) circuit unless marked otherwise. This note replaces "Only when marked for limited-energy circuit use";</li> <li>11) Added UL 61010-2-201 as an alternate Standard for switching components of control circuit devices in paragraph to 45.1.1.</li> </ol>			

**TABLE 2 – EFFECTIVE DATE TBD**

Future revision of these requirements is expected and a future effective date will be established for these requirements after the status of proposed revisions to these requirements has been determined.

Paragraphs	Date Issued	General Subject and Comment
36.3.1, SB4.2.1 Exception No. 4, Table C.1.1	4/24/18	Electromagnetic Interference Filters Used with Variable-Speed Drives – Requiring a short circuit current rating for filters on the line and load side of drives
47.3, 55.8, Table C.1.1	4/24/18	UPS Equipment in Industrial Control Panels – Additional installation requirements covering pollution degree, overvoltage category and ambient temperature
52.1, Table 52.1	6/16/2017	Location for marking nameplate restricted to the exterior of the enclosure for enclosed panels – Previous requirement allowed marking on the inside of the panel.
29.1.3	3/7/17	Circuit Identification Methods – Identifying all conductors at each termination point in the panel
SB4.2 Exception No. 3	6/16/17	Enclosure air conditioners that are cord-and-attachment-plug connected – Not required to have a short circuit current rating.